TECHNICAL BOOK REVIEW INDEX

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JULIA C. WALLACE, *Editor*

Volume 13 **September, 1947** **Number 7**

THE purpose of the Technical Book Review Index is primarily to identify reviews in current scientific, technical, and trade journals; secondarily, when feasible, to quote from these reviews. In the evaluation of scientific and technical books, reviews constitute the best existing source of information. The service of the Technical Book Review Index is thus in the field of evaluation, rather than in competition with existing publications which announce new and forthcoming books, list books by subjects, or supply bibliographic information. Each quotation immediately follows the name of the journal from which it is taken. Obviously, these brief extracts, detached from the context, must not be accepted as conclusive. Except for the correction of obvious errors, the bibliographic information is as given in the reviews. It is, therefore, in many cases incomplete and in some cases probably inaccurate.

Bader, Louis, & Picker, Sidney. Marketing drugs and cosmetics. 342p. 1947. Van Nostrand, New York, $5.

American perfumer and essential oil review, **May 1947, p.497. ¾ col.**

"A specialized treatment of the marketing of drugs and cosmetics and contains much useful material, particularly the statistical data. While it contains little in the way of information that has not been published at some time in the various advertising, trade or other publications and government reports, the data is [sic] selected and organized for ready reference and application. Unfortunately there are omissions of important material which the reader would normally expect to be included in a work of this sort . . . On the whole the book is a good elementary treatment of the merchandising practice in the allied industries."

Ball, J. M. Reclaimed rubber; the story of an American raw material. 248p. 1947. Rubber Reclaimers' Assoc., New York, $5.

Chemical age, **July 5, 1947, p.25. ¾ col.**

"Not a scientific monograph or handbook, but rather a collection of historical, commercial and technical facts on the important industry of rubber reclaiming . . . The text is well supported by 80 illustrations, by graphs and statistics, and is accompanied by a selected bibliography . . . Will be of great interest and help to all who are engaged in this old, yet ever-changing business of rubber reclaiming, now also extended to synthetic rubber scrap."

India rubber world, **June 1947, p.414, 416. ⅔ col.**

"The work of . . . a man well qualified to do the job by virture of his long years of experience and writing in all branches of the rubber industry . . . The material is presented in such an interesting manner that readers should gain a much greater insight into the history and development not only of the rubber reclaiming industry, but also the rubber goods industry as a whole."

Banning, William Peck. Commercial broadcasting pioneer; the WEAF experiment, 1922-1926. 308p. 1946. Harvard Univ. Press, Cambridge, Mass., $3.50.

Electronics, **May 1947, p.284. ⅓ col.**

"For those who listened to the first WNAC-WEAF network broadcast on a crystal set or thrilled to voices from across the continent over a loudspeaker during one of the first transcontinental hookups, this book is rich and satisfying. The subtitle . . . appropriately defines the contents. The author, as a former assistant vice-president of the American Telephone & Telegraph Co., was admirably placed to evaluate the great role [sic] played by the Telephone company as a builder and supplier of all types of broadcast equipment, custodian of the networks, and operator of its own stations." *A. A. MCK.*

Bettinger, Hoyland. Television techniques. 237p. 1947. Harper, New York, $5.

Scientific American, **Aug. 1947, p.91. ⅓ col.**

"Although this book was prepared essentially as a guide to showmanship in television practice, it will hold much of interest to anyone who follows the development of what may prove to be our next great advance in the entertainment field. The author deals briefly with the basic principles of television and then goes into such phases of production as pictorial composition, stage techniques, writing for television, directing and producing, stage lighting, and the use of motion pictures in television." *A. P. P.*

Televiser, **July-Aug. 1947, p.24. ½ col.**

"The value of Mr. Bettinger's *Television Techniques* lies in his stressing the pictorial composition and continuity required in video production—a phase too frequently ignored today. Starting with a non-technical introduction of the 'Tools of the Trade,' Mr. Bettinger . . . quickly orients the reader in the television studio. The underlying 'visual' theme of his work can be seen in his discussion of 'Video Techniques' and 'Writing for Television,' two phases which he covers exceptionally well, keeping the reader aware that television is a picture

medium. His chapter on writing is recommended reading for every script writer . . . His brief chapter on lighting is a refresher course in both equipment and lighting showmanship."

Tide, May 23, 1947, p.74. 1½ col. including another review and an illustration.

"With line drawings to supplement the text, the author explains television to the layman and then launches into specific techniques with emphasis on the importance of the attention balance between visual and aural stimuli."

Campbell, Neil. See Schmidt, Julius, & Rule, H. G.

Carmichael, W. L., and others. Callaway textile dictionary. 392p. 1947. Callaway Mills, La Grange, Ga., $4.

American dyestuff reporter, May 19, 1947, p.277. ⅝ col.

"In preparing this First Edition, the authors set up a framework embracing basically those products contained in the categories of yarns and woven fabrics. This includes the dyeing and finishing processes, the major fibers used (both natural and synthetic) and the steps involved in the production of the completed articles. Within this framework, an effort was made to list and define as far as was practicable, the significant terms used in connection with these subjects. A large number of unusual terms are included in additon [sic] to those of common and current usage. In order to adhere to the concept of a dictionary, conciseness was sought, at the occasional possible sacrifice of detail such as would have been included in a work of a more encyclopedic nature . . . In addition to the more than 6,000 definitions of terms, the book contains 66 illustrations designed to aid in an understanding of the definitions illustrated."

Rayon textile monthly, April 1947, p.140. ⅝ col.

"This is the first new textile dictionary in more than 20 years or so and was badly needed . . . Nicely gotten up in clear and unmistakable type, 2 columns and very well put together. The definitions have been kept down in wordage and in the majority of cases well defined, both from a technical and consumer viewpoint . . . The authors deserve much credit for the enormous amount of work that was involved and Callaway Mills for encouraging and publishing this work. It will fill a very great gap and it will be very helpful to students, lawyers, judges and arbitrators . . . Should be in the library of every textile town and mill."

Carr, T. H. Sub-station practice. 396p. Chapman & H., London, 32s.

Electrical review, June 13, 1947, p.996. ¾ col.

"The author has assembled much useful information and has emphasized from personal experience such of it as seems to him to be worthy of special attention. His energy and enthusiasm arouse some measure of admiration in spite of the shortcomings of his method of presentation . . . Technical platitudes, discontinuities, malassociations of ideas will make the reading of the book irritating to anyone who respects the English language, unless his perspicuity enables him to recognize a new McGonagall. Such calculations as are included are elementary and are usually of types which can be found in numerous manufacturers' catalogues and other data book . . . All who are keenly interested in electricity supply practice could derive some benefit from a close examination of this book." *C. W. M.*

Electrician, June 27, 1947, p.1776. 1 col.

"Will form a very useful addition to the library of any power supply engineer; it is very easily readable and, as books on this subject are very few, it gives much useful information which is not easily accessible elsewhere and is a sound review of the best British practice in sub-station design." *E. O. T.*

Clay Sewer Pipe Association, Incorporated. Clay pipe engineering manual. 159p. 1946. The Association, 1105 Huntington Bank Bldg., Columbus, Ohio, $3.

Water & sewage works, April 1947, p.96. ⅔ col.

"An engineering reference and data book applicable to the design and construction of sanitary sewer systems, storm water drainage systems and to the drainage of sub-soil, roadways, airports, and railroads."

Close, Paul Dunham. Thermal insulation of buildings. 104p. 1947. Reinhold, New York, $1.75.

Coal-heat, July 1947, p.61. ½ col.

"Provides information and data on the various economic and comfort advantages of thermal insulating materials, a description of the various types of insulation used in dwellings and other buildings, and an explanation of how they are applied. While . . . not intended to be an exhaustive treatise on the thermal insulation of buildings, it is a technically competent and, at the same time, readily understandable discussion of the subject, well suited for use by insulation salesmen, architects, engineers, builders, students and home owners."

Heating and ventilating, May 1947, p.112. ⅔ col.

"After discussing the basic principles of insulation and heat loss coefficients for various types of building construction and materials . . . [the author] shows how to calculate heat loss, and how to estimate fuel savings as the result of thermal insulation. Beside the author's consideration of dwellings, he alsq has a chapter on insulating farm buildings other than the farm residence. Farm building insulation is considered important as a means for promoting the health of farm animals and increasing financial returns . . . Should prove valuable to one who wants to develop his knowledge of building insulation. Included . . . is a tabulation of insulation manufacturers and one on trade names."

Coale, Ansley J. The problem of reducing vulnerability to atomic bombs. 116p. 1947. Princeton Univ. Press, Princeton, N. J., $2.

American scientist, July 1947, p.410. ¾ col.

"Under the broad headings 'Reduction of Vulnerability Under an Effective Agreement,' 'Reduction of Vulnerability When Atomic Armament Is Unlimited,' 'Technical Considerations,' and 'Research and Analysis Needed,' Mr. Coale covers a variety of aspects of this pressing problem."

Chemical and engineering news, July 21, 1947, p.2111. ⅔ col.

"Essentially a statement of the problem of atomic defense, together with a careful and conservative analysis of the factors bearing on the solution . . . Does not pretend to find a

solution but does point out the things that should be studied in detail . . . Essentially a guide for the important task that must be undertaken immediately if the nation is to survive atomic attack and resume productive activity afterwards . . . I found the text very well organized with discussion in logical order and with no serious faults or omissions. It is realistic . . . Although the language is non-technical, it does require careful reading. With more care in writing, the book would be read more easily . . . Should be carefully read by the type of citizen who has membership in a professional society such as the AMERICAN CHEMICAL SOCIETY . . . Should be of interest to the 'League of Frightened Men'." *Alden H. Waitt.*

Chemical engineering, July 1947, p.267. ¾ col.

"Of the four principal chapters, the first describes the role [sic] of vulnerability reduction under the assumption that there is to be an effective international limit of atomic weapons. The second describes vulnerability if atomic armament continues without limitation. The third chapter is a brief but excellent summary of the technical characteristics of the bomb, with detailed appraisal of destructive possibilities of existing and improved designs, delivered by plane or supersonic rockets. The fourth chapter lists topics where research is needed and other obstacles exist to the formation of an effective program." *S. D. Kirkpatrick.*

Engineering and mining journal, June 1947, p.122. 1 col.

Factory management and maintenance, June 1947, p.264. ¼ col.

"Endeavors to present in non-technical language a precise and straightforward analysis of the problems of atomic energy. The author examines the situation not only as it would appear under an effective agreement between nations, but also under an ineffective agreement or no agreement at all."

Coker, R. E. This great and wide sea. 325p. 1947. Univ. of North Carolina Press, Chapel Hill, N. C., $5.

American scientist, July 1947, p.410, 412. 1⅓ col. including another review.

"[Dr. Coker's] text is fluent, but sedate; his style is professional and restrained. He writes with authority, and documents his statements with frequent reference to the writings of the leading oceanographers of Europe and America. He enlivens his pages with diagrams, sketches and an unusually fine collection of relevant photographs."

Natural history, June 1947, p.246. ⅝ col.

"This book may be adequately called an introduction to the dynamics of the ocean and the physical, chemical, and biological roles [sic] which it plays. The author avoids technicality and redundancy. He reviews the enormous oceanographic knowledge in a generalized form, suitable for either the intelligent layman or the uninitiated. In this respect, the book meets the demand for a more popular and simplified account of a complex and diverse field of science." *Plato Telaporus.*

Colvin, Fred H. 60 years with men and machines; an autobiography. 297p. 1947. McGraw, New York, $3.50. (Whittlesey House publication.)

Factory management and maintenance, June 1947, p.262. ⅓ col.

"A humorous running account of the author's experiences in the world of machinery, inventions, and production. While participating in the development of many of the mechanical devices now taken for granted, such as the bicycle, the automobile, airplane, and the modern railroad locomotive, he has known many of the foremost scientists, engineers, inventors, and industrialists."

Modern machine shop, June 1947, p.358. ⅜ col.

"This book, written by a man who has spent some 63 years in or connected with the metal-manufacturing industry will strike a responsive and nostaglic [sic] chord in the memories of metal goods manufacturers, machine tool builders, machine shop executives and old-time machinists . . . Men who have had a part of the development of machinery or machine tools or who have been closely identified with this great industry will find Mr. Colvin's book absorbing."

Crouse, William H. Automotive mechanics. 673p. 1946. McGraw, New York, $4.50.

American machinist, June 5, 1947, p.198. ½ col.

"This comprehensive book provides by far the best study of the subject thus far in a single book. Each subject is treated in a simple manner to make it clear to the student, yet it is not an elementary book. The material on each subject is detailed and up-to-date . . . In a field where most of the books have been rather unsatisfactory either because they dealt with only part of the subject or consisted primarily of a collection of independent descriptions from manufacturer's literature, this volume stands out for the obvious care which has gone into its preparation."

Culver, Charles A. Musical acoustics. Ed.2. 215p. 1947. Blakiston, Philadelphia, $3.

Electronics, June 1947, p.267. ¼ col.

"Terminology of sound, hearing, and music, and operating principles and tonal characteristics of various musical instruments, including brief mention of electronic types, are described for those unfamiliar with physics. Although the material is concise, it is comprehensive. However, because of excessive caution in being scientifically accurate, especially in details that the intended reader cannot appreciate, the lucidity of the introductory chapters suffers." *F. R.*

Science, July 4, 1947, p.22. ⅝ col.

"A useful and readable book for those interested in the physics of music . . . Should also bring reading enjoyment to a much wider audience . . . Should prove most valuable, however, as a text in a one-semester course for music majors . . . Written at a level appropriate to the usual background and needs of such students." *Walter A. Rosenblith.*

Scientific American, June 1947, p.280. ½ col.

"A textbook for college students majoring in music. Without being more than arithmatically mathematical, it is essential physics all through—about like a high school or first-year college text if wholly devoted to this one corner of that science. Interference; hearing; resonance; pitch; quality; consonance and dissonance; strings; vibrating air columns; rods and plates; stringed and wind instruments—these are typical chapter subjects." *A. G. I.*

Tele-tech, July 1947, p.64. 12 l.

"Basic features of the physical laws of sound,

such as its nature, its propagation, interference, resonance, pitch and sound quality, are explained with particular attention to features of interest in connection with musical instruments. Concepts used in music are treated and several instruments discussed. One chapter deals with the acoustics of rooms, another with electronic instruments. Recording and reproduction of music also are presented."

Dawes, Chester L. A course in electrical engineering. Ed.4, enlarged. v.2: Alternating currents. 708p. 1947. McGraw, New York, $5.

Coal age, May 1947, p.154. ¼ col.

"Basic material is expanded to show in greater detail its application to electrical machinery, apparatus and instruments, and illustrations showing transformers, alternators, induction motors, rectifiers, etc., are up-dated to show modern practices. New information is included on synchronous motors, selsyns, rectifiers, long-line high-voltage transmissions, low-voltage three-phase networks, delta and Y systems and lightning protection. Trigonometric, logarithmic and other tables; questions and problems."

Electrical world, June 7, 1947, p.216. ⅙ col.

"Circuit properties are now treated more extensively by conjugates and complex operators, newer instruments are discussed and considerable attention is given to application of magnetically-oriented steel in wound-core transformers. More is presented on synchronous motors, selsyns, low-voltage networks, and on electron tubes including the technique of frequency modulation. For teacher and student it is of note that all the numerous problems are entirely new."

Factory management and maintenance, May 1947, p.258. 8 l.

"Enlarged to include recent developments in the field. Fundamental background material has been extended considerably, and its application to the study of electrical machinery and apparatus is explained in detail."

Den Hartog, Jacob P. Mechanical vibrations. Ed.3, revised. 478p. McGraw, New York, $6.

American aviation, June 1, 1947, p.8. 9 l.

"Offers the engineer a thorough technical explanation of vibration phenomena. Complete explanations and proofs are included, but without using mathematics higher than simple differentiations and integrations . . . A new chapter on helicoper [sic] ground vibrations has been added."

Scientific American, Aug. 1947, p.90. ¼ col.

"Approaching the phenomena of mechanical vibrations from a purely technical standpoint, this text lays stress on the many applications of principles and calculations to the problems of vibration encountered by the engineer in actual practice. The book has been kept as simple as possible, and nowhere has mathematics beyond simple integrations and differentiations been employed . . . All of the material has been brought up to date. Considerable new material —including data on airplane wing flutter, helicopter ground vibrations, and torsional pendulum dampers—has been added, and the number of problems has been increased." *N. H. U.*

Transactions of the Institute of Marine Engineers, July 1947, p.128. ⅛ col.

"The basic aim of the book, which is to deal with advanced problems of mechanical vibrations using the minimum of higher mathematics compatible with arriving at a complete understanding of the subject, has already given this book a wide popularity among practical engineers who may find some difficulty with the more usual type of mathematical approach to this type of problem. The examples, many of which are taken from the author's own experience in industry, add to its value."

Dunlap, Orrin E., jr. Future of television. Revised edition. 194p. 1947. Harper, New York, $3.

Advertiser, July-Aug. 1947, p.38. 1⅝ col. including an illustration.

"Should be read by every advertising man, manufacturer and publisher whose activties [sic] some day may lead to a dollar-and-cents acquaintance with television. The most impressive feature . . . is its readability. Unlike the great majority of books on television, this one was not prepared for the engineer or technician but for Mr. and Mrs. John Public . . . Unusually well indexed and, in addition, contains a comprehensive list of 'Historic Steps in Television,' embracing scientific, programming and regulatory highlights from 1867 to March of this year."

Broadcasting, May 26, 1947, p.23. ¼ col.

"Looks forward with the television industry and attempts to chart the future of video, and its effect upon the home, theatre, sports, business, etc. There are also sections on television techniques, some technical aspects, and a brief history of the medium."

Televiser, July-Aug. 1947, p.27, 32. ⅝ col.

"For the reader who would like to be brought up to date on television, its inception, growth and public progress, he will find in the book factual details from Nipkow to 1947 telecasting, interestingly reported. The book's one drawback lies in its stressing of early day problems and experiences."

Edminster, Frank C. The ruffed grouse. 385p. 1947. Macmillan, New York, $5.

Journal of soil and water conservation, July 1947, p.159. 1⅜ col.

"Brings under one cover the pertinent information on the most important game bird of the forests of North America. The story of its life, ecology, and management is of major interest to sportsmen, woodsmen, and conservationists . . . Recommended without reservation. It is a contribution of outstanding value to foresters, soil conservationists, wildlife managers, and sportsmen who have a true interest in nature . . . Will undoubtedly be the outstanding wildlife book of the year." *Warren W. Chase.*

Natural history, May 1947, p.196. ¾ col.

"The life history of the bird is described in detail. There is ample discussion of the bird's requirements and preferences for shelter, food and water, its weather hazards, and interrelationships with other wildlife, as well as questions of conservation and management." *J. T. Zimmer.*

Egloff, Gustav. Physical constants of hydrocarbons. v.4: Polynuclear aromatic hydrocarbons. 540p. 1947. Reinhold, New York, $17.50. (American Chemical Society. Monograph series.)

Canadian chemistry and process industries, April 1947, p.347. ½ col.

"A collation of all melting points, boiling

points, density, and refractive index data available on polynuclear aromatic hydrocarbons. The compounds included under this classification are fused ring hydrocarbons having at least one aromatic ring. The study conducted for this volume is a continuation of that made in Volume III by the same author."

Chemical and engineering news, June 30, 1947, p.1894. 1 col.

"A collation of the available data on the melting points, boiling points, densities, and refractive indexes to the polynuclear aromatic hydrocarbons . . . One of the important services which will be performed by this book is that of indicating the direction which the work of experimenters should take to improve our present-day knowledge of the polynuclear aromatic hydrocarbons . . . A necessity for all laboratories whose work involves polynuclear, fused-ring hydrocarbons having at least one aromatic ring . . . Will be invaluable as a summary of known structures and as a source of references to the literature for these compounds. The reviewer feels that every technical library should have a copy of this book." *Frederick D. Rossini.*

Engelder, Carl J. Fundamentals of semi-micro qualitative analysis. 385p. 1947. Wiley, New York, $3.50.

Analytical chemistry, April 1947, p.287. ⅝ col.

"The author has written a combination of textbook and laboratory manual which is based on five years of teaching experience. The working directions are generally sound, and the book should be especially useful in courses for premedical and engineering students." *A. A. Benedetti-Pichler.*

Ewing, J. A. Thermodynamics for engineers. Ed.2. 389p. 1946. Cambridge Univ. Press, London, 22s. 6d. net.

Transactions of the Institute of Marine Engineers, April 1947, p.54. ⅛ col.

"Having regard to advances in certain spheres of experimental and applied thermodynamics since 1936 much important work since that date is omitted. Reference is made specifically to the heat pump, properties of fluids and gases including steam, turbines and jet engines, fuels for petrol engines, newer concepts of the steam cycle as applied to regenerative and reheat turbines and the attainment of still lower temperatures. Many additional references to the literature on modern developments could have been given. The gas turbine might well have found inclusion representing as it does a major evolution within the last decade . . . The basic work of Ewing needs no introduction and the book is thoroughly recommended to engineers wishing to acquire a working knowledge of thermodynamics from the physical standpoint."

Fairchild, David. The world grows round my door; the story of the Kampong, a home on the edge of the tropics. 347p. 1947. Scribner, New York, $5.

Journal of the New York Botanical Garden, July 1947, p.170. 1 col.

"The style . . . is conversational, with many human-interest subjects treated as chapter-essays. This makes easy reading although none the less rich in plant study and kindly philosophy. The purpose . . . is to show 'a fascinating world of living things' and with this 'picture of a family and a garden and a house of this epoch bring pleasure to others' . . . The illustrations are fine photographs of Dr. Fairchild's own taking. It occurs to this reviewer that the world is better known since World War II, and that veterans will find familiar places and plants in 'The World Grows Round My Door'." *Eva Noble.*

Natural history, June 1947, p.246. ¾ col.

"Story of the Kampong, Mr. Fairchild's home on the edge of the tropics, located near Coconut Grove, Florida. In preparing this place for plant experiments there came to be so many buildings that it suggested a little village—a Javanese Kampong. And 'The Kampong' it became. Here we find enthralling descriptions of the introduction and development of forms of plants new to the American tropics, many of which have proved to be of great commercial value. These included mangoes, avocados, loquats, various relatives of the cherimoya, many kinds of citrus fruits, and others too numerous to mention . . . This is another fascinating book by this indefatigable plant explorer, who has succeeded in an unusual way in putting himself in his book. Eighty full pages of photographs add to the attractiveness and interest of the volume." *Clyde Fisher.*

Scientific monthly, Aug. 1947, p.175. 1½ col.

Fink, Donald G. Radar engineering. 644p. 1947. McGraw, New York, $7.

Aviation, June 1947, p.102. ⅛ col.

"Designed specifically to acquaint engineers and technicians in the fields of electronics and radio with the new methods and special applications of established techniques used in radio detecting and ranging of objects, the book is divided in two parts which may be considered respectively as theory and practice. Fundamental concepts essential to understanding radar technology are thoroughly covered in the first part. Second part is devoted to components and structures, also circuits used in various types of radar equipment."

Electronics, July 1947, p.258, 260. 1⅝ col.

"A book which represents a substantial step forward in bridging the gap between wartime secrets and engineering and educational requirements of a peacetime world. The author . . . has admirably succeeded in reducing the rather complex subject of radar to straightforward engineering reading. Throughout all 12 chapters, the reader is continually conscious that the writer is qualified in the subject as an engineer and has excellent talent for exposition and to-the-point explanation of difficult subjects . . . Not highly mathematical, although an understanding of calculus and harmonic functions will be of considerable assistance to the reader, particularly in the first half . . . which deals with radar fundamentals. The second half is more descriptive than mathematical, and is generally devoted to illustrations of various types of radar gear developed during the war . . . Because of the wealth of information contained therein, representing both collected works and information revealed for the first time, this book should be very useful to anyone studying, teaching, or engaged in engineering practices dealing with radar or radio." *Harold A. Zahl.*

Telephone engineer and management, July 1947, p.49. ½ col.

"An authoritative treatise designed to acquaint Engineers and Radio and Electronic Technicians with the new techniques and with spe-

cial applications of old techniques used in radio detecting and ranging . . . Presented in two parts. Part I, Radar Fundamentals, and Part II, Radar Circuits and Components. A detailed index affords means of quickly locating the discussion of items of equipment or basic principles . . . To the engineer or technician desirous of keeping abreast of the development of this vital weapon the book is an essential part of the library."

Tele-tech, July 1947, p.64. ½ col.

"The text not only contains a considerable amount of information of recently declassified material but also an excellent background of high frequency theory and technic. This way of representation permits engineers and technical workers in the radar and related fields to understand the new developments."

Fleck, H. Ronald. Theory of polymerisation. 145p. 1947. English Universities Press, London, 10s. 6d.

Chemical age, May 31, 1947, p.722. ⅖ col.

"First of a series of manuals for students, designed primarily for those who work in the plastics industry . . . Will appeal not only to those who work in the plastics industry, but to those who are concerned merely with the ultimate use of its products . . . Deals with the most difficult yet most fundamental aspect of the chemistry of plastics, the theory of polymerisation, simply explaining the definitions and most fundamental aspects of the subject for the student and the apprentice in the most understandable way . . . Gives suitable examples and laboratory exercises, together with calculations, but . . . lacks a subject index."

Fluegge, S. See Mattauch, Josef.

Frisch, Otto R. Meet the atoms; a popular guide to modern physics. 226p. 1947. Wyn, New York, $3.

Aero digest, May 1947, p.107. ⅓ col.

"Dr. Frisch has written a really engaging book on a surely abstruse theme, albeit his manner is somewhat overly that of a grade-school teacher who is doggedly sweet and infinitely patient with immature minds. One hastens to add that this manner has much to recommend it, especially that phase of it which uses the common objects of every-day life as familiar illustrations."

Bulletin of the atomic scientists, June 1947, p.163, 166. ½ col.

"The teaching of physics has been made easier by the publication of this book . . . There is no doubt that the average reader will learn a great deal of physics in reading it, and can proceed with confidence in the accuracy of the material despite its lucidity . . . Should be useful in adult study groups as well as in popular science classes at the high school and junior college level." *W. F. Libby.*

Scientific monthly, Aug. 1947, p.165. ⅘ col.

"Those readers who will go carefully through its 226 pages will know at least what they are talking about when they speak of the atom. It supplies this minimum of basic physical knowledge, which is absolutely necessary for the understanding of the questions concerning the immense amounts of energy hidden in the central nucleus of the tiny atomic body . . . For those who are interested in the question of *what* the atom is and not *how* to use atomic energy, Dr. Frisch's book certainly represents a well of knowledge." *G. Gamow.*

Gilbreth, Lillian M., & Cook, A. R. The foreman in manpower management. 199p. 1947. McGraw, New York, $2.50. (McGraw-Hill industrial organization and management series.)

American machinist, June 5, 1947, p.196, 198. ½ col.

"A straightforward, factual book, crammed full of suggestions and procedures for the foreman and the foreman-to-be . . . Stresses the human factor and what can be in every phase of plant relationships to make the organization run more smoothly . . . Treatment is simple, honest and helpful, and reflects the modern concept of the worker as an individual entitled to individual consideration and treatment . . . The book naturally suggests itself as 'must' reading for all orders of management that must deal with people from selection to separation."

Industrial relations, July 1947, p.43. ⅘ col.

"A book that should be of great help to both foremen and industrial relations executives. It's not just another inspiration book, but a careful study . . . of what makes a worker tick, and what a foreman should do about it."

Inland printer, June 1947, p.76. ½ col.

"The foreman who is seeking to improve his ability to do his job, and to gain greater power for constructive handling of all those over whom he has control, will find much of practical help in this book . . . Divided into five parts, covering the basis for manpower control, the employe as a new worker, the employe on the job, the employe as a person, and the foreman as a person."

National safety news, June 1947, p.76. ⅓ col.

"The authors have directed the book to the foreman but, unfortunately, have written it in language and style unlikely to be appreciated by foremen. The authorship of Lillian Gilbreth guarantees for any book that it contains sound information about modern management methods. Management engineers and personnel people may get from it a better understanding of the foreman's job. From the foreman's standpoint this is much to be desired." *Glenn Griffin.*

Glasstone, Samuel. Thermodynamics for chemists. 522p. 1947. Van Nostrand, New York, $5.

Paper trade journal, June 26, 1947, p.55. ¼ col.

"Although an elementary acquaintance with calculus is necessary to understand the text there are more than 100 numerical examples worked out and serve as a refresher in this subject. In treating the various topics the author has attempted to simplify the theories and show the practical applications. Some attention is given to statistical methods which are rapidly coming into general use by chemical engineers. Attention is given to calculations of energy and heat capacity, entropy relations, phase equilibria, thermochemistry, fugacity and activity, and properties of solutions."

Petroleum processing, May 1947, p.399. ⅘ col.

"Designed primarily as a textbook for college students of chemistry and chemical engineering. About 100 illustrative numerical problems are worked out in the text, and a total of about 360 problems are presented for solution by the reader. In treating the various topics, the particular method used in each case

has been chosen by considerations of simplicity, practicality, and logical approach. Whenever feasible, the generalized procedures, involving reduced temperatures and pressures are introduced . . . The applications of partition functions to the determination of heat capacities, entropies, free energies, equilibrium constants, and the like have been introduced where their use is most practicable."

Graves, Lawrence M. Theory of functions of real variables. 300p. 1946. McGraw, New York, $4.

Product engineering, May 1947, p.146. ¼ col.

"An exposition of the more fundamental and generally useful parts of the theory of functions of real variables; it also contains many results not generally found in the standard treatises on the subject . . . The subjects treated under chapter headings are: The real number system, point sets, function and their limits, fundamental theorems on differentiation[,] the Riemann integral, uniform convergence, functions defined implicitly, ordinary differential equations, the Lebesgue integral and the Stieltjes integral."

Gregory, Edwin, & Simons, E. N. Stainless and heat-resisting steels. 131p. 1947. Hutchinson, London, 8s. 6d.

Chemical age, May 10, 1947, p.618. ⅓ col.

"The authors have produced an up-to-date work on the wide range of stainless and heat resisting steels, which proved invaluable during the war and are increasingly used in times of peace. After a careful classification from the metallurgical point of view of the various types of steels, this scientific and technical publication proceeds to a comprehensive discussion of the methods of working and heat treatment, as well as of the properties and application of each type of steel, clearly explained to even the non-technical reader. Numerous charts, tables and diagrams as well as a subject index and ample illustrations complete this plainly written treatise, which will be valuable to the student and user of these materials."

Electrical review, May 30, 1947, p.882. ⅓ col.

"This book, of pocket size, represents a dual effort at compression of the maximum possible into small space with as much simplification as the authors have dared. They have not attempted an exhaustive compilation, but rather the classification of a subject that is highly technical and sometimes abstruse. They have succeeded, as before, in providing a simply written account which the student layman will find easy to digest. The task could only have been undertaken with any assurance of accuracy by the chief metallurgist to one of the largest British makers of these kinds of steel."

Foundry trade journal, May 22, 1947, p.80. ⅝ col.

"As a work of reference worthy of a place in any foundry library, it can be unreservedly recommended." *V. C. F.*

Steel, June 23, 1947, p.130. ¼ col.

"Stainless and heat resisting steels, are covered in detail for the non-technical reader . . . Begins with a classification from the metallurgical point of view of the various types of steels . . . Provides a comprehensive discssion of the methods of working and heat treatment, as well as the properties and applications of each."

Grout, Roy A., ed. The hive and the honeybee. 633p. 1946. Dadant & Sons, Hamilton, Ill., $4.

Chemurgic digest, July 15, 1947, p.198. ¼ col.

"The outstanding volume on this subject and should be in every library of those interested in beekeeping. Each section has been presented by an authority on that subject. The entire story from the development of beekeeping, the industry, anatomy of the honeybee, the colony, activities of the bees, the honeycomb, sources of nectar and pollen, the various steps in beekeeping and management, the marketing of the honey crop and production and uses of beeswax are included . . . There are many other chapters of real value to the beekeeper. The authors have presented clearly each subject in a readable and understandable manner. There are also many illustrations." *E. L. L.*

Gleanings in bee culture, June 1947, p.340. ½ col.

"A welcome addition to the modern bee-keeping library, since it is almost a new book in which painstaking efforts are visible . . . May be considered another encyclopedia in the making though appearing as a standard text book akin to Dr. Phillips' . . . I think all studious bee-keepers, and not Americans alone, should welcome and possess 'The Hive and the Honeybee'."

Harris, Seale. Banting's miracle; the story of the discoverer of insulin. 245p. 1946. Lippincott, Philadelphia, $3.

American scientist, April 1947, p.266, 268. 1⅛ col.

"There is not a dull moment in the book. There is mounting excitement as one reads of the birth of Dr. Banting's idea regarding the pancreas, of his experiments in collaboration with Dr. Charles Best, and of the final discovery of insulin. There is satisfaction in seeing him rewarded by a grateful government, and in reading about his speeches, journeys, the Nobel prize and other triumphs. There is the wonder of another doctor who paints exceptionally well, and who tried his hand at carving and modelling. And there is the tragic sense of loss when, a major in the Second World War, he died in an airplane crash in 1941."

Chemical and engineering news, May 5, 1947, p.1296. ¾ col.

"Although the well-known physician, Seale Harris, is the official author of the book, the entire manuscript was revised and rewritten by a professional editor who transformed it 'into a carefully arranged chronological biography'. Obviously, strict observation of the rules of scientific writing cannot be expected in a book produced by a nonscientist for nonscientists . . . If one uses the book as a source of exact information, an unexplained disagreement between the text and the facsimile of a paper by Banting and Best is disconcerting; but surely the difference of a few months is quite irrelevant for the reader who wants to know what kind of man Banting was and what kind of life he had." *J. J. Bikerman.*

Ohio state medical journal, May 1947, p.460. 7 l.

"Twenty-five years after the discovery of insulin, it is fitting that the story of it and its discoverer should be told and told by one who had a great reputation in the field of diabetes at the time of its appearance. The book itself is a model of what such biographies should be."

Scientific monthly, May 1947, p.438. 1⅝ col.

"So many hearsay stories have been circulated about Banting since his discovery of insulin that the present volume based on accurate historic researches of the author is not only timely but highly appreciated by the medical historian and those who have ever treated diabetics." *Arno B. Luckhardt.*

Harrison, V. G. W. Definition and measurement of gloss; a survey of published literature. 145p. Printing & Allied Trades Research Assoc., Charterhouse Chambers, Charterhouse-square, London, E.C.1, 10s. net.

Engineering, May 30, 1947, p.455. 2½ col.

"The work of a member of the Research Association staff, Dr. V. G. W. Harrison, who has made a thorough review of all the important technical literature on the subject over the past 40 years, and who presents a critical study of his discoveries that is a model of its kind. Not only does it summarise for the first time a mass of information, hitherto scattered over papers and periodicals in many languages and now logically arranged to exhibit the growth, and present state, of knowledge about the 'finish' of paper and similar materials; but it adds thereto the outcome of much capable original thought on the part of the author."

Metal treatment, Spring 1947, p.37. ⅔ col.

"Surface appearance in its various aspects has concerned metallurgists to an increasing extent in recent years, and Dr. Harrison's review of the literature on gloss will be welcomed by many besides those in the paper industry for whom it is particularly intended . . . Divided into four parts dealing with physical factors influencing sensations of gloss and lustre, physiological and psychological factors influencing sensation of gloss and lustre, attempts at practical gloss measurements and a discussion on the present state of knowledge."

Harrop, P. F. Exercises in engineering drawing. 64p. 1947. Macmillan, New York, 3s. net.

Mechanical world, April 25, 1947, p.397. 7 l.

"Provides a set of graded examples for technical schools and institutes . . . Starts at the beginning and takes the reader quickly through the elements of geometric construction, projection to gradual intricacy of the orthographic portrayal of solids and engineering details. The numerous drawings are of good size and clearly displayed."

Hartog, Jacob P. den. See **Den Hartog, Jacob P.**

Hartree, Douglas R. Calculating machines. 40p. 1947. Cambridge Univ. Press, London, 2s. net.

Electrician, April 25, 1947, p.1086. ½ col.

"Prof. Hartree . . . describes the American machine, outlining its scope and limitations, and discusses shortly the requirements of future electronic calculators, of which two are now being built in this country. Finally, he speculates on possible changes, brought about by these machines, in our approach to physical problems."

Heaton, Noel. Outlines of paint technology. Ed.3, revised. 448p. 1947. C. Griffin, London, 32s.

Paint manufacture, April 1947, p.114. 1⅝ col.

"Intended primarily for students, it is sufficently comprehensive in scope and accurate in detail to merit the attention of all engaged in the industry, whatever their status . . . Now . . . divided into three parts, resulting in a more logical order of presentation. The text has been extensively re-written; new chapters have been added on 'Water Paints' and on 'Metallic and Luminous Pigments' . . . The electron microscope, the nitroparaffins, *monastral* blue and lecithin receive due mention . . . Both author and publisher are to be congratulated on having, in this new edition, enhanced the merit of an already well-known book and in so far overcoming present difficulties that it is now available again at a relatively small increase in price . . . Really well written and most informative."

Hecht, Selig. Explaining the atom. 205p. 1947. Viking, New York, $2.75.

American scientist, July 1947, p.408, 410. 2 col. including another review.

"A well-rounded, beautifully integrated, and objectively analyzed account of atomic structure, how it was revealed to the human intellect, how it may change or be changed, and what the nuclear forces can do when released."

Bulletin of the atomic scientists, June 1947, p.166. ⅝ col.

"Selig Hecht . . . has written a popularization of nuclear physics that should be studied closely by all professional popular science writers. It is a beautiful example of popular science at its very best. Furthermore, it is a sound demonstration that the facts of science can be explained to non-scientists in a thoroughly understandable manner, without talking down to the audience or without over-simplifying the subject matter to the point of creating technical inaccuracies. The author should be enthusiastically congratulated . . . The author's style is pleasant, and the subject matter should be comprehensible to anyone with a highschool education. The illustrations are appropriate, and in general they are well done." *H. Brown.*

Chemical and engineering news, June 23, 1947, p.1830. ⅝ col.

"Dispassionately, as a scientist who himself understands the things he undertakes to explain to others, the author develops the subject of nuclear fission historically in a way that should enable an intelligent person to understand what kind of force is involved in atomic bombs and how it can be released when desired. Such an understanding, free from the hysterical terror warping most judgments on the subject, is highly desirable." *D. H. Killeffer.*

Natural history, June 1947, p.247, 287. 1 col.

"The first sentence . . . reads: 'This is a book for the complete layman.' Strange to say, that statement is correct. Any layman who can read and is willing to read this book slowly and carefully will close it with a quite complete understanding of the nature of atoms and the forces involved. Most important, perhaps, he no longer will be in doubt as to the difference between chemical and nuclear (so-called atomic) energy. Professor Selig Hecht has accomplished this feat in the only manner in which it can be accomplished, by following the historical development." *Willy Ley.*

Science illustrated, July 1947, p.81. 6 l.

"Just about the simplest explanation of atomic energy we're likely to get. Mr. Hecht, professor of biophysics at Columbia University,

explains everything from what the atom is to why there are no fundamental 'secrets' about the bomb."

Scientific monthly, Aug. 1947, p.165. 1⅔ col.

"Although there is not a word of politics or sociology in *Explaining the Atom,* it is, nevertheless, by purpose and design, a book that is **profoundly provocative** in its political and sociological ramifications. By conveying to laymen the intellectual drama of the developments of atomic physics during the past fifty years, Selig Hecht . . . has written a book supplying a frame of reference by means of which individuals can think, act, and vote intelligently in dealing with the important issues concerning atomic power. That there is great need for such an undertaking can be readily recognized, for only by understanding the basis and development of atomic energy can one judge the legislation and foreign policy that concern it." *James J. Jelinek.*

Sky and telescope, Aug. 1947, p.16. 1⅛ col.

"Throughout, with carefully illustrated definitions, the reader is led to a grasp of modern atomic and nuclear theory. This is a primer, not a textbook, and much that could have been said is omitted. At times this brevity necessitates dogmatic statements of concepts that were long in developing. Yet these interesting points are incidental to the purposes of the book." *Fletcher G. Watson.*

Herod, Frank. See **Overton, Louis J.**

Hilditch, T. P. Chemical constitution of natural fats. Ed.2, revised and enlarged. 527p. 1947. Chapman & H., London, 45s. net.

Chemical age, June 14, 1947, p.782. 1⅛ col.

"The sequence of classification adopted in the first edition (1940) has been maintained. The component acids of fats of aquatic flora and fauna, land animals and vegetable fats are discussed in this order. A good deal of fresh information has been added to these chapters as well as to the following chapters on component glycerides and individual fatty acids. The immense amount of detailed and exacting work in the collection of the data and the magnitude of painstaking research in bringing the present second edition up to date, can be gathered from the fact that the fat composition of some 700 species is given; in several instances these numbers include fats from different parts of the same animal or plant . . . Professor Hilditch is to be congratulated on the present revised edition of his valuable book for the renewed stimulus it provides for the reader and the guide it gives to the research worker." *M. K. Schwitzer.*

Chemical trade journal and chemical engineer, July 4, 1947, p.19. 1½ col.

"Does not concern itself with the technical aspects of oils and fats production and utilisation—on which aspect our bibliographical resources are ample—with the analytical averages such as iodine number, saponification value and the like used in commercial practice, nor, except in minor degree, with the biochemical aspects of the fats. The work is, as its title indicates, one in which the natural fats are treated systematically as a specific group of chemical compounds though the data obtained will, we feel sure, be found of use eventually in applied research on the subject. The new edition is also characterised by greater detail on the experimental technique . . . It is unique of its type; its possession is indispensible to specialists in the field and it is of high value to all interested in the oils and fats."

Hoelscher, Randolph P., and others. Industrial production illustration. Ed.2. 243p. McGraw, New York, $4.50.

Mechanical world, March 28, 1947, p.293. 1⅛ col.

"This most comprehensive book is in a class apart and is startlingly novel in its mode of presentation. It is an artistic achievement. Devoid of theoretical complexity, it should have a distinct appeal to all those who are engaged in pictorial representation either as a livelihood or as a hobby; and either as a text book, or an interesting illustrated dissertation on this all important subject, we commend it to the notice of students, draughtsmen, architects, publicity managers and all those responsible for producing effective illustrative matter." *G. H. P.*

Product engineering, June 1947, p.161. ⅝ col.

"Contains a comprehensive treatment of pictorial drawings from the standpoint of theory. It probably represents the first new synthesis in the theory of orthographic projection that has been published in some years. A secondary aim has been that of practical usefulness and to that end the authors have prepared the drawings and the discussion in the light of the impetus given to pictorial drawing by the war industries. Perspective, therefore, has been dealt with from the viewpoint of the machine and aircraft industries rather than from the conventional architectural approach."

Howard, Beverly E., & Strohmeier, W. D. You can learn to fly. 335p. 1947. Prentice-Hall, New York, $3.75.

Aviation, June 1947, p.102. 9 l.

"The authors, with about 11,000 hr. between them, have turned out a neat book on 'how to do it'. Since it is written in simple straightforward style and illustrated profusely throughout, novice airmen will find every subject interestingly covered—entertaining, too. George B. Post has contributed an appendix which considers flying with floats."

Aviation news, May 26, 1947, p.16. 1 col.

"Airport operators and commercial pilots who look past the title of this book, will find it more than slanted toward the neophyte pilot—it offers them meaty food for thought as well . . . Chapters of the book on learning to fly are probably the best which have been written since the Langewiesche classic *Stick and Rudder* . . . The Howard-Strohmeier book stands as a worthy companion volume, in this field." *A. McS.*

Flying, June 1947, p.92. ⅝ col.

"The authors have strayed well off the monotonous path in trying to tell the reader what it's all about, simply. And both men are outstanding in their respective fields, thus giving this book that invaluable ingredient, know-how—something so many other books on this subject lack . . . There are only one or two slips . . . Should be in the private pilot's library . . . Not only good reading, but . . . an excellent reference book. Every pilot has questions that puzzle him as his flying progresses; this book, with its excellent index, is the next best thing to hangar-flying at your home airport." *Max Karant.*

Howard, Frank A. Buna rubber; the birth of an industry. 307p. 1947. Van

Nostrand, New York, $3.75.

Petroleum processing, May 1947, p.399. ⅝ col.

"A case history of the synthetic rubber industry and its relationship to all American industry and economics. It records in a simple, straightforward manner the growth of Buna production from the days when the beginnings had to be made from foreign patents and research to its present stature of importance to the nation and to world trade . . . Robert A. Millikan, in the introduction, says: '. . . The factual attitude and scientific objectivity which Mr. Howard has maintained throughout his narrative, in particular his freedom from caustic criticism in spite of the fact that the book lies in two highly controversial fields, international big business and governmental administration, gives it a unique value as a case history in the fields'."

Howitt, Frederick O. Bibliography of the technical literature on silk. 248p. 1947. Hutchinson, London, 21s.

American dyestuff reporter, Aug. 11, 1947, p.440. ⅔ col.

"Not merely a Bibliography, because the bibliographical list of references is accompanied, by a continuous expansion and commentary on the fundamental facts covered and presents a comprehensive review of the whole subject . . . Also gives a list of 22 publications on the subject of silk, and a very complete Glossary of Silk Terms. In fact it is one of the most complete and useful bibliographies we have seen . . . The author has done an extremely commendable job and furnished us with a guide to the published literature dealing with silk in respect to the technical processing and to the scientific aspects of silk from both the practical and fundamental points of view . . . Should be in every textile library."

Rayon textile monthly, April 1947, p.140. ½ col.

"Represents a fairly exhaustive survey of the published literature on silk, which was completed by Dr. Howitt in 1945 . . . American magazines are well represented and included, which is not often the case with British authors and books . . . One of the first British textile books to come thru after the war and we hope that British publishers will continue the good work. With the scarcity of American books on silk, this book will be sought after by all manufacturers, who will again use silk and make silk goods."

Jackson, Lloyd H. Yarn and cloth calculations. 198p. 1947. Textile Bk. Pub., Inc., 303 Fifth Ave., New York, $6 (Foreign, $7).

Rayon textile monthly, June 1947, p.110. ⅓ col.

"A text book, complete, well-arranged and technically accurate. It covers the subject in a logical order taking up, first, yarn numbering systems, then yarn conversion, ply yarns and resultant counts and grey cloth calculations. Warp, filling and cloth calculations are worked out in detail and a whole chapter is devoted to the theory of fabric construction . . . Gives complete details of fabric construction analysis, including the factors to be determined and equations to use . . . Will be of inestimable value to textile students and engineers, technologists, yarn spinners, cost accountants, buyers, importers, exporters and fabric designers, technicians and analysts."

Jaffe, Bernard. New world of chemistry. Revised edition. 710p. 1947. Silver, New York, $2.88.

Journal of chemical education, May 1947, p.259. ½ col.

"One scarcely thinks of *New World of Chemistry* as a high-school text save for the tools of chemistry which . . . [the author] handles so simply and clearly to interest the student. It reads more like a story . . . A thoroughly up-to-the-minute chemistry with many suggested activities . . . Such an intrinsically interesting book, so far above the average textbook in chemistry and a favorite with the reviewer, that the reviewer is reluctant to add even one adverse criticism. The choice of subject matter is marvelous, but the reviewer feels that the coherence and unity of the factual material are lost if one follows the sequence of topics in the Table of Contents . . . Will meet with widespread approval and endorsement of teachers of chemistry." *Greta Oppe.*

School science and mathematics, June 1947, p.586. ½ p.

"Most teachers of high school chemistry will find this book an excellent one for classroom work . . . Thoroughly up to date . . . Abounds in excellent diagrams, illustrations, and pictures. The subject matter is keyed to everyday living and touches the student's own daily environment. The chapters on formula writing, equation writing, and problem solving are excellent. Each of the chapters furnishes sufficient practice work to give the average student a good mastery of these essential tools of chemistry. At the end of each chapter the teacher will find excellent aids for individualizing her instruction . . . Here is a book that makes provision for the terminal student as well as the student who plans on going to college." *Kenneth E. Anderson.*

Jeffries, Harold, & Jeffries, B. S. Methods of mathematical physics. 679p. 1946. Macmillan, New York, $15.

Aeronautical engineering review, May 1947, p.59. ½ col.

"Harold Jeffries' *Operational Methods in Mathematical Physics,* now out of print, has largely been incorporated into this new book and new material added. Knowledge of the calculus is assumed. Proofs are given under rigorous conditions since the authors state that careful analysis is of primary importance to science, where the principles taken as fundamental must be as closely related to observation as possible."

Jensen, Alfred. Applied engineering mechanics. 316p. 1947. McGraw, New York, $3.

Canadian machinery and manufacturing news, May 1947, p.167. ½ col.

"An elementary textbook, treating in readily understandable language, and with clear and easily followed diagrams, the stock problems in statics, up to bridge and roof trusses, equilibrium of force systems, and the friction problems . . . A striking feature of the arrangement of the entire book is that by far the greater proportion is devoted to examples and problems; the actual text is quite short, well integrated with many typical problems to show the application of each step as it comes up, and a generous supply of review questions at the end of each chapter."

Mechanical world, June 13, 1947, p.588. ⅛ col.

"The treatment employed by Professor Jensen calls only for an elementary knowledge of mathematics, and he makes a special effort to impart a sound knowledge of fundamental principles. He describes applied engineering mechanics as being concerned mainly with applications of the principles of mechanics to the solution of problems commonly met within the field of engineering practice. He expounds the principles of statics and dynamics in a series of 20 chapters, each of which contains numerous fully worked-out examples and he gives a graded set of exercises (with answers) to be tackled by the student. In addition, the author gives a brief summary of the contents of the chapter and a set of review problems (with answers) plus a number of review questions which should enable the student to decide whether he has really learned the contents of the chapter. Altogether nearly one thousand problems and questions are included . . . Covers the ground of a first-year course at a university and is particularly well adapted to use by a student working on his own." *L. A. B.*

Modern machine shop, June 1947, p.362. ⅔ col.

"In preparing this volume, which is designed to meet the minimum requirements of a beginning course in mathematics, the author has endeavored to make it suitable in content and approach both for students in engineering and architecture and for those in junior colleges and technical institutes. In developing the material, the author has been guided by more than 15 years of experience in teaching mathematics, both to college students and also, for a brief period, to technical institute students with varied and sometimes limited mathematical background."

Power, June 1947, p.130. ⅓ col.

"Prepared in response to requests for a text that would not only meet minimum requirements of the usual college course in mechanics but that would also use a simplified approach needing only an understanding of high-school mathematics. In other words, the text is suitable for college students in engineering and architecture and for those in junior colleges and technical institutes . . . The text proceeds gradually from elementary subjects to the more difficult."

Karr, Charles Lee, jr., & Karr, C. R. Remington handguns. 125p. 1947. Military Service, Harrisburg, Pa., $5.

Army ordnance, May-June 1947, p.542. ⅛ col.

"Another of the series of National Rifle Association Library books and, from this reviewer's study, is the best to date. Nothing can be added to the comments of Lieut. Col. Calvin Goddard in his introduction that it 'represents one more foundation stone in the edifice which is the story of handguns in America. It is a sturdy block, carefully hewn and polished, and the two workmen who quarried and laid it have produced a job which is plumb, square, and level' . . . Contains a full, complete, and accurate description of the Remington line of handguns, with illustrations which leave no doubt in identification of various models to even the novice. The material is outstandingly useful to the advanced student who is aided by the model chronological index and bibliography." *H. E. Stier.*

Kaye, S. Leon. Production and properties of plastics. 612p. 1947. International Textbook, Scranton, Pa., $5.

Scientific American, May 1947, p.233. ⅛ col.

"Detailed and thorough is this technical treatment of the chemistry, properties, design, and production of plastics. But despite the studious handling of the text the author has managed to explain so completely the technical terms used that the result is a reference work which will find wide use by anyone connected with the plastics industry itself or any industry in which plastics materials might be used. In every respect the information presented goes far beyond the elementary stage and gives specific details wherever needed. Coverage is complete from the early developments of plastics through discussions of various plastics materials to molding and laminating processes . . . The most complete book of its type yet to come to this reviewer's attention." *A. P. P.*

Kurrein, Max, & Lea, F. C. Cutting tools for metal machining. Ed.2. 312p. 1947. C. Griffith, London, 28s. net.

Industrial diamond review, July 1947, p.217. ⅔ col.

"Fills a gap formerly existing in technical literature, since it contains data and information on British, Continental and American practice in this field, and shows where the technique was similar and where differences existed. In this way, this book was, and is of great help both to the tool designer and to the man in the workshop. It differs from usual handbooks on this subject, in that it deals in great detail with the process of finish turning by sintered carbide and diamond tools." *P. G.*

Mechanical world, May 30, 1947, p.520. ⅞ col.

"An admirable blend of scientific reasoning and wide practical experience, and abounds in examples both of theory and application. Such an approach is rather novel, but, we think, sound in principle . . . Although this book, in a way, summarises the authors' well known work in this field, they have not confined themselves to a narrow domain, as the copious references in the text bear witness. The whole work is, in fact, a competent and up-to-date survey of an important branch of engineering. If it is one which is not so widely understood as is desirable, it will not be for want of an excellent guide. For this reason we are confident that this book will become an indispensable reference work for the busy tool engineer as well as a mine of information for all who have daily contact with modern machine tools." *J. W.*

Lauer, Henri, and others. Servomechanism fundamentals. 277p. 1947. McGraw, New York, $3.50.

Aeronautical engineering review, May 1947, p.60. ⅔ col.

"The authors are associated with the Radio Corporation of America and their teaching and writing during the war is stated to be the basis for this book, which is intended to provide the engineer with a systematic design procedure for fulfilling specified operating requirements. A clear and readily understandable introduction to basic principles and simple applications is followed by chapters giving a more detailed explanation of follow-up links and then by a review of the fundamentals of mechanics and electricity. This review requires a knowledge of higher mathematics, as does the entire

book which is on an engineering level . . . A valuable feature . . . is the use of numerous simple diagrams illustrating basic principles in addition to many others for the more technical points."

Electrical manufacturing, July 1947, p.242. ¼ col.

"An excellent text for the engineer or physicist, setting forth basic principles and showing how the elements of design of simple servomechanisms can be handled with nothing more difficult than differential equations. With books on this subject so few, this one is a valuable addition to the literature."

Power, June 1947, p.154. ⅓ col.

"Though of a fundamental nature this book has been written principally for those who intend to design and build servomechanisms; it aims to satisfy the needs of engineering students and practicing engineers."

Leggett, William F. Story of wool. 304p. 1947. Chemical Pub., Brooklyn, $5.

India rubber journal, Aug. 2, 1947, p.12. ½ col.

"Historical in character, the book tells the story of wool from earliest times and traces the development of wool and the woollen industry in many countries in particular and in the world in general . . . Has an especial interest for textile technicians, chemists and students, but it may well be commended as educational and stimulating reading for workers in the various branches of the textile industry and also for those engaged on the clothing side of the rubber industry."

Rayon textile monthly, April 1947, p.140. ½ col.

"Deals primarily with the historical background of wool, sheep and the wool textile industry in all parts of the world. Mr. Leggett has an unusual style and is particularly well equipped to handle this subject . . . An excellent book for students, teachers, historians and mill men, one that should be in every library. It does not and is not intended to deal with the technic of processing of wool."

Lewis, Eugene W. Motor memories; a saga of whirling gears. 258p. 1947. Alved, 12 Buhl Bldg., Detroit, $3.50.

Forbes, July 1, 1947, p.41. ⅝ col.

"No mere book of memories, this is the colorful recital of more than 50 years of automotive history, told by a man who has 'lived' with the automobile since its appearance as the 'horseless carriage' . . . Bound to become an invaluable historical source book, Motor Memories contains much that is new, little-known or almost forgotten. Featuring a chapter by chapter record of the 22 surviving makes of cars—out of a total of 2,200 original models—Lewis recounts his story in warm, human phrases and in a vivid, easy-to-read style."

Steel, May 5, 1947, p.84. ⅝ col.

"Commentary on the history of the automobile as recalled by a man who for 20 years prior to 1917 was closely associated with automotive development as sales manager for Timken Roller Bearing Co., and who for the past 30 years has been president of the Industrial National Bank of Detroit. His memorabilia deal with the early days of the 'horseless carriage,' biographical detail on the great and near-great who brought the industry to its present eminence, reflections on the important role [sic] played by partsmakers and body builders, along with factual data and dates marking the industry's milestones . . . An important contribution to automotive literature. The critical reader will enjoy the hundreds of behind-the-scenes incidents occurring over the past 50 years to which the author must have been an eyewitness on many occasions."

Ley, Willy. Rockets and space travel; the future of flight beyond the stratosphere. Revised and enlarged edition. 374p. 1947. Viking, New York, $3.75.

Scientific American, May 1947, p.234. ⅛ col.

"A record of man's attempts to gain access to outer space, with a discussion of what problems must be overcome before he can reach his goal. Among the additions to the text is a chapter on the famous experiments at Peenemuende, where the V-2 was developed. The appendices also have been amplified, with new data added on rocket aircraft and the much-discussed rocket mail." *N. H. U.*

Li, K. C., & Wang, C. Y. Tungsten. Ed. 2, revised and enlarged. 430p. 1947. Reinhold, New York, $8.50. (American Chemical Society. Monograph series, no.94.)

American metal market, April 22, 1947, p.9. ⅝ col.

"This comprehensive survey of the history, geology, mineral technology, metallurgy, chemistry, applications and economics of tungsten is the second and revised edition of a work which is believed to be the most authoritative coverage of this heavy metal . . . The authors have prepared their broad survey in a logical and readable manner. The style and typography are also such as to add to the interesting side of the volume. The monograph is well equipped with illustrations, diagrams, charts, statistical data, references, an appendix and index. Most of the chapters have been subjected to reading and suggestions by other experts in their particularly specialized fields . . . This excellent book brings up to date a storehouse of worthwhile technical and trade information . . . Should be a required addition to the book shelf of any engineer, metallurgist, chemist, businessman or economist who may be concerned either directly or indirectly with the unique metal about which very little was known until around the close of the 18th century."

Materials & methods, June 1947, p.133. ½ col.

"This new edition will be regarded as the most detailed and authoritative work in this field thus far to be published. Practically every possible phase of the metal has been covered. The illustrations, some in color, which were a marked feature of the first edition, have been all retained."

Liepmann, Hans W., & Puckett, A. E. Introduction to aerodynamics of a compressible fluid. 262p. 1947. Wiley, New York, $4. (Galcit aeronautical series.)

Aeronautical engineering review, May 1947, p.59. 1¼ col.

"An excellent introduction for understanding some important compressible flow phenomena since it emphasizes the derivation of fundamental relations based on physical laws and principles as well as the physical interpretation of these relations. It thereby provides a useful background for formulating significant experiments and theory to further the understanding of such phenomena and for realizing that both methods of research are inherently related and

stem from the same fundamental physical considerations . . . Written with exceptional clarity and physical insight and offers the reader an excellent foundation in this timely subject." *Paul Lieber.*

Aviation, May 1947, p.116. ⅓ col.

"Probably the first introductory book on compressible fluids to be published in English, this work should be of real value to aero engineers and physicists working in fluid mechanics, also to advanced students of elementary fluid dynamics. Part I . . . 'One Dimensional Motion,' concerns basic compressibility phenomena under conditions entailing relatively little mathematics; and Part II, 'Two-and-Three Simple Geometrical Dimensional Motion,' treats more difficult phases and includes the mathematics which are requisite in the various computations."

Mechanical engineering, June 1947, p.516. 1⅝ col.

"An excellent introduction to the aerodynamics of a compressible fluid . . . Should be of particular, direct help to workers in aeronautical engineering and of interest and value to those in related fields . . . A well-organized and systematic treatment which includes recent developments. The presentation is sound and accurate. The level is that of a graduate course. Emphasis is almost exclusively upon the derivation and the meaning of the fundamental aerodynamics relations . . . The double purpose of the book is to help the reader understand observed compressibility effects and to prepare him for the more mathematical literature of the subject. The authors have realized their objective in a well-written book." *R. C. Binder.*

Mackenzie, Compton. The vital flame. 88p. 1947. Muller, London, 12s. 6d.

British plastics, July 1947, p.325. 7 l.

"This history and development of the gas industry as presented by Compton Mackenzie makes interesting and informative reading . . . Pleasantly illustrated with 42 colour photographs and 5 pictorial charts."

Chemical trade journal and chemical engineer, July 4, 1947, p.19. ⅔ col.

Coke and gas, May 1947, p.124. ⅓ col.

"An astonishing book because it represents an astonishingly new departure in the propagation of facts about what, after all that may be thought and believed, is essentially a commercial enterprise. The name of its author is sufficient in itself to arrest attention, and what he has to say about the gas industry—and that is what the book is about—not only holds attention, but must be revealing to the very people who have spent their lives in it."

Gas world, May 3, 1947, p.556, 558. 2½ col. including an illustration.

"The book has been well worth waiting for, and all at Gas Industry House connected with its launching, are to be heartily congratulated upon its presentation, and general lay-out. To those who have been connected with the industry for many years, its pages have much readable content dealing with the historical past, the progressive present, and the future importance of one of Britain's greatest public utilities. To those outside the industry, the general reading public, it unfolds a romance of history, looking back to the 18th century . . . We have seldom seen a history of a particular industry so attractively set forth, supported by 42 colour plates and a number of Isotype charts, all of which graphically show the many and varied fields in which gas serves so well, ranging from the heating of Liverpool Cathedral by gas to the kitchen of a prefabricated house. Mr. Mackenzie has brought to his task all those qualities of perception, imagination and humour which have made his books numbered among the best sellers . . . Here is no scientific work, but a popular treatment of the history of a great feat of private enterprise." *A. H. S.*

May, Earl Chapin. A century of silver, 1847-1947. 388p. 1947. McBride, New York, $3.50.

Steel processing, May 1947, p.308. ⅓ col.

"The basic theme . . . is the evolution of New England pioneers from struggling frontier farms to fireside craftsmen . . . Traces the evolution of silverware in mass production from early plated products made at home by crude processes, through britannia ware which marked the beginning of mass production, and finally into plated and sterling ware produced by modern methods. This story of silver, its history and its place in American industry is set against the background of the rise and development of the International Silver Company which is one of the largest of its kind in the world, and typifies the best in modern production and human relations . . . Illustrated with many prints and photographs."

Meinhardt, Peter. Inventions, patents and monopoly. 352p. 1946. Stevens, London, 25s.

Chemistry & industry, April 5, 1947, p.182. ⅝ col.

"Contains a simple, concise but entirely reliable account of British patent law and practice, and . . . interprets to the ordinary citizen the spirit and purpose of the patent law . . . Covers a broad field . . . [The author] has drawn on economics and sociology no less freely than upon his own wide experience of the working of the patent systems of England, the United States and many European countries, notably Germany and Switzerland . . . An original and important contribution to the literature relating to patents and inventions . . . May be confidently recommended to chemists engaged in industry, as indicating how their work may be made to yield its maximum contribution to the well-being of chemical industry and of the community." *S. I. Levy.*

Electrical review, May 2, 1947, p.722. 1 col.

"Includes suggestions for reform based on those of instructed people, including the author. It is well documented with reference to the Patents and Designs Acts and to the literature of the subject and illustrated with examples, but is not burdened with case law and legal forms. The first part deals with inventors and inventions, the second with British law and practice, the third with abuse of patent monopoly, and part four with suggestions for patent law reform . . . A word of praise is due to the author for the sympathetic comprehension which he shows of the employer-employee situation." *S. T. M.*

Iron and coal trades review, April 18, 1947, p.692. ⅓ col.

"While being of assistance to legal practitioners specialising in patent law, is sufficiently lucid to be understood and appreciated by any diligent reader seeking general information on the subject . . . There is a good index, and a bibliography which will facilitate the acquisition of further knowledge on various aspects of the subject."

Morris, Joseph. Escalator method in engineering vibration problems. 270p. 1947. Chapman & H., London, 21s. net.

South African engineering, May 1947, p.115. 12 l.

"This detailed technical book is mainly an account of methods adopted or developed by the author for dealing with strength and vibration problems in engineering practice, particularly in aircraft engineering. Capt. Morris's work is well known to the aircraft industry, but a complete account of his researches will be especially welcome to engineers everywhere engaged in the problems of vibration."

Transactions of the Institute of Marine Engineers, July 1947, p.128. ⅔ col.

"The author . . . forgets that many students of his work will be less practised in mathematical thought and methods than is he himself. As a result this volume will be of real value only to those with a first class training in mathematics and a considerable amount of practice in the application of such training to practical problems . . . The volume forms a most valuable addition to the available literature on vibration problems. Many authors who deal with this subject are either engineers with insufficient mathematical training to offer any real advance in methods of attack, or mathematicians unable to appreciate that their theory is only useful if it can have practical application. Mr. Morris has both mathematical skill and appreciation of practical problems, and as a result has been able to make a notable contribution towards the improvement of methods of calculation applicable to engineering problems."

Morris, T. N. Principles of fruit preservation. Ed.2. 198p. 1946. Chapman & H., London, 18s. net.

Science progress, April 1947, p.360. 1 p.

"Although the author has brought the pectin story very much more up-to-date than was possible in his previous edition, there are numbers of points on which he is either too brief or completely silent . . . The chapter on the composition of fruits is most disappointing . . . The book does not pretend to refer entirely to English fruits, and in view of the enormous importance of citrus juices it would have been well if analyses of oranges and lemons, etc., had been included. Dr. Morris has recognized the increasing importance of fruit juices as a new method of preserving fruit, but the chapter concerned deals almost entirely with practical methods, and one looks in vain for an examination of the principles which govern enzyme action, the suppression of yeast development, and other points which are fundamental to commercial production . . . The vitamin chapter is too slight to present the full story in detail . . . The rest of the book is written in a clear and lucid style, and the scientific presentation of the various principles involved . . . clearly enunciated. No one wishing to undertake the processing of fruit could afford to be without this book, but its value would be greatly enhanced if it could be extended in certain directions to make it more comprehensive." *V. L. S. C.*

Murray, Francis J. Theory of mathematical machines. 116p. 1947. King's Crown Press, Columbia Univ., New York, $3.

Electronics, May 1947, p.284. ⅛ col.

"Those engaged in construction of continuous calculating devices, differential analyzers, and digital calculators will find this comprehensive discussion of the basic principles of such devices invaluable. Fundamental requirements are considered, and mechanical and electronic approaches are taken up one by one. Perhaps a third of the book is devoted to the electronic circuitry of calculators." *J. M.*

Nixon, Eugene W., & Cozens, F. W. Introduction to physical education. Ed.3, revised. 251p. 1947. Saunders, Philadelphia.

Health news, April 28, 1947, p.69. ⅔ col.

"Designed as a textbook for use by the prospective physical education teacher and for use in courses in principles of physical education. Teachers will make no mistake in including it in their personal libraries . . . Considerably revised to include materials covering some significant influences which have affected American physical education between two World Wars. One very important and special feature of this edition is the up-to-date general bibliography at the end of the book. At the close of each chapter are additional references which are fairly accessible to students and teachers. Aims, objectives, policies and standards are clarified which should be of inestimable help to both students and teachers in determining their programs in terms of fundamental principles of education rather than in haphazard, hit-or-miss fashion. Sound procedures are outlined relative to program planning to fit the various age groups and sexes." *Ellis H. Champlin.*

Overton, Louis J. Heating and ventilating. Ed.6; edited by Frank Herod. 337p. 1947. Sutherland, Manchester, England, 16s. net.

Industrial heating engineer, May 1947, p.104. ¼ col.

"Follows closely the lines of the fifth edition, with the exception of minor alterations to text and illustrations to bring the matter up to date . . . We can once again thoroughly recommend this new publication as an eminently sound and practical textbook for both student and practising engineer alike."

Power & works engineering, June 1947, p.161. 6 l.

"The popularity of this book, which first appeared in 1927, has required a sixth edition, but the changes in comparison with the fifth are negligible, amounting to little more than the omission of a couple of blocks. It is this minimum of alteration which presumably enables the price to be maintained at the same figure."

Transactions of the Institute of Marine Engineers, April 1947, p.54. ¼ col.

"Obviously been written for the benefit of young students and minor executives concerned with the heating and ventilation of various types of buildings, and as such must serve a very useful purpose. It could be described as a ready-reference manual for the heating engineer, as the data, descriptions and illustrations given . . . deal with the type of problems which must arise from time to time in the ordinary business of heating engineering. Reference is made to the practice of ventilation and air conditioning, also the introduction of air treatment in industrial processes, but the information given on these subjects is of little value to the designer of these types of equip-

ment . . . Since the author confines himself to the more common applications as associated with building work generally, there is, of course, no guide to the standards which must be adopted in marine practice. Such being the case the manual is of little value to the student of marine engineering."

Pitcher, Robert M. Practical accounting for oil producers. Ed.2, revised and enlarged. 645p. 1947. Mid-West Printing Co., 423 E. Fourth St., Tulsa, Okla., $15.

Oil and gas journal, April 12, 1947, p.81. ¼ col.

"The new material consists in the main of an interesting presentation of examples and specimen voucher entries graphically and explicitly to portray the handling of accounting for such vital information as the problems faced under 'free well' agreements; how a record of oil and gas depletion is set up for each producing property; how the 'depreciation ledger' should be kept, and the purpose of using an 'outside interest' ledger when it is only an intermediate record."

Roberts, John A., comp. Spring design and calculations. 114p. 1947. Technical Research Laboratory, Herbert Terry & Sons, Ltd., Redditch, 10s. 6d.

Aircraft engineering, June 1947, p.195. ⅝ col.

"Has all the authority that years of experience in spring making can give . . . Also a most useful little book for the practical designer . . . [The author] does deal with the theory, but mostly he is concerned with the practical aspect of designing a spring to do its job efficiently . . . The chapter of 'Helpful Hints' . . . is a fine effort to pass on to designers the experience of experts and is well worth reading each time a spring is designed. The book, though a slim volume, is a most useful addition to any designer's library of reference books and is well worth the couple of hours needed to discover the ground which it covers." *W. M. N.*

Mechanical world, April 25, 1947, p.397. ⅝ col.

"This book, published under the auspices of the Technical Research Laboratory of the well-known spring makers, should be of great practical interest to all engaged in spring design work. The subject matter, comprising 18 short chapters, is well arranged in convenient form, and deals very clearly with the calculation of stresses and deflections of the many types of spring in use . . . The illustrations, both half-tone and line, are well presented. The book is compact, clearly printed, and entirely without extraneous matter . . . Should be of considerable value as an addition to the technical library of any up-to-date engineering firm, as well as for engineering designers and draughtsmen." *M. H. S.*

Power & works engineering, June 1947, p.161. 12 l.

"This excellent little book . . . provides a logical basis for designers and others concerned . . . As simple as the nature of the subject permits and thoroughly practical, embodying not only academic methods of calculation but also the empirical findings of long and wide experience."

Robinson, Victor. White caps; the story of nursing. 425p. 1946. Lippincott, Philadelphia, $3.75.

American journal of nursing, May 1947, p.357. 1 col.

"A history of nursing written by a doctor is a rarity which would interest nurses whatever its merit. In this case that interest is well rewarded . . . A mine of information, some of which may be new even to the nurse who is a serious student of nursing history . . . Will not be particularly suitable as a text in the history of nursing; probably it was not so intended . . . The illustrations, most of which are excellent, are placed all together early in the book although they cover a wide range of subject material . . . Full of fascinating information . . . Should find a place on the reference shelf of every school of nursing. As reading matter, any nurse and most lay readers will find it interesting and enlightening. And most nurses will feel that their profession owes a debt of gratitude to the late Dr. Robinson for this scholarly and sympathetic portrayal of its development." *Carolyn L. Widmer.*

Hygeia, June 1947, p.480. ⅔ col.

"This extremely readable story of nursing as it has existed through the ages, explains early hospital development and medical history . . . Few members of the medical or nursing profession will find it easy to lay it down once they sample its drama and romance and share with the author his enthusiasm and historical perspective." *D. F. S.*

Schmidt, Julius, & Rule, H. G. Textbook of organic chemistry. Ed.5, revised and edited by Neil Campbell. 939p. 1947. Gurney & J., London, 32s. net.

Chemical age, April 5, 1947, p.419. 1½ col.

"The appearance of a new edition of this well-known standard work is ample evidence of its popularity. This popularity has been well earned by previous editions largely due to the clear way in which the fundamental facts of organic chemistry were presented. In this new edition Dr. Campbell maintains this feature . . . Many of the topics are necessarily treated briefly, but this is no drawback since in all cases of particular interest either the original literature is cited or else some comprehensive review article which is easily accessible. In revising this new edition Dr. Campbell is to be congratulated in producing a volume which is both useful as a textbook and as a work of reference which well deserves a position on every chemist's bookshelf."

Chemistry & industry, May 10, 1947, p.262. ½ col.

"The work has been kept a text-book and not turned into a treatise—though many may find it a useful place of first reference. Then the new matter which includes recent developments in the chemistry of the steroids, natural colouring matter, vitamins, chemotherapy and plastics has been smoothly introduced into the framework of the original text . . . A volume on which both Dr. Campbell and the publishers are to be congratulated: to it, the honours student and those requiring a book of general reference may confidently turn."

Nature, July 26, 1947, p.106. 1 col.

"The general plan of the work remains as before, and it is suitable for the advanced student and research worker rather than the novice . . . It is inevitable in a book of this kind that in order to cover the field in a reasonable space much of the matter should be compressed and simplified; it is perhaps a pity

that in some instances such great brevity has been considered necessary, but to compensate for this, innumerable references are given which should make it very easy for any particular topic to be studied further . . . Errors in the text are few and seem to be minor misprints; the index, of vital importance in a book of this sort, would appear to be adequate."

Schwamb, Peter, and others. Elements of mechanism. Ed.6, revised and rewritten by Venton L. Doughtie. 428p. 1947. Wiley, New York, $4.

Electrical world, June 7, 1947, p.216. 8 l.

"Continues the original M.I.T. approach to motion analysis, linkages, cams, rolling contacts, gears, worms, trains, belts, ropes, chains, tackle, threads, escapements, etc. Treatment is mathematical, quantitative and extensive in each category."

Machinery (New York), May 1947, p.238. ⅛ col.

"Gives the fundamental principles of kinematics in the field of mechanical movements. Principal machine elements are selected and a study presented of their motions when combined in certain ways . . . Completely revised to include recent data on the subject. Laboratory problems emphasizing practical applications of theory are included for the first time."

Railway mechanical engineer, May 1947, p.241. ⅓ col.

"Dealing with the application of the fundamental principles of kinematics in the field of mechanical movements the book covers the more common and fundamental machine elements and presents a study of their motions when combined in certain definite ways . . . Retains the presentation of the fundamentals of the motion and the forces transmitted by parts of a machine and introduces new illustrative examples and new problems throughout the text . . . Machine parts studied include linkages, cams, gears, belts and ropes, and bodies in rolling contact. Analyses of motion, vectors and acceleration are also made."

Seely, Fred B. Resistance of materials. Ed.3, revised. 486p. 1947. Wiley, New York, $4.

General Electric review, May 1947, p.58. ¼ col.

"Notable for its clear presentation of the basic knowledge of the subject of mechanics of materials, the third edition has been improved throughout in response to suggestions and criticism offered by many of the users of the second edition . . . With its more than 400 illustrative figures, and 640 problems emphasizing actual engineering applications, this book should be useful to practicing engineers and designers." *E. Holm.*

Materials & methods, May 1947, p.129. ½ col.

"Treatment of the subject is devoted to engineering problems in general; emphasis on any particular field is avoided. An excellent foundation is thus furnished for the more advanced study of mechanical, civil, aeronautical and other divisions of engineering . . . None of the features which have made the book popular and widely used for ready reference by practicing engineers have been lost in the revision. The main problem . . . consists of determining the relationship between the loads acting on a member and the resulting stresses and deformations in the member."

Simon, Leslie E. German research in World War II. 218p. 1947. Wiley, New York, $4.

American scientist, July 1947, p.418. ⅓ col.

"In a penetrating analysis of the organizations engaged in German war research, Colonel Simon . . . reveals the lack of coordination between civilian and military research and industrial laboratories. He demonstrates very clearly, however, the importance of the work done in ballistics, fire control and aerodynamics. He believes the outstanding scientific achievements of the Nazis lay in their development of rocket weapons and jet-propulsion engines. He comments also on their work on the wind and super guns, wind tunnels, aircraft armament, tanks and the use of sound as a weapon."

Electronics, July 1947, p.260. ⅓ col.

"Generalization of a 200-page government technical report by scientists who examined German technical establishments immediately after their capture. Important projects are summarized, with highly interesting photographs of new equipment that received little or no field use . . . A concluding chapter gives recommendations for fostering long-term scientific research." *J. M.*

Iron age, June 12, 1947, p.68. 9 l.

"Drawing on first-hand observation and information obtained from examining German scientific establishments immediately following their capture, the author has recorded German weapons research and has explained the extent to which the Germans succeeded or failed in their projects, and why they did so. Descriptions of experiments with jet-propulsion, rockets, sound as a weapon, tanks and aircraft armament are included."

Skinner, Charles, and others. Henrici's Molds, yeasts, and actinomycetes. Ed.2, revised and rewritten. 409p. 1947. Wiley, New York, $5.

American scientist, July 1947, p.420. ½ col.

"Completely rewritten, by a trio of distinguished authorities, with two new chapters added, one dealing with antibiotic substances, including penicillin, the other with variations in the lower fungi. Some deletions have been made, but the spirit remains the same, and the book is intended for the same audience—students of bacteriology, including many who may have completed their formal education. Chapter II is Henrici's own; Chapter III was prepared by Dr. Skinner from Henrici's notes, while many additions, deletions and rearrangements were made by Dr. Emmons."

Soil science, May 1947, p.418. 10 l.

"A completely revised edition of Henrici's book of the same title that was published in 1930. Part of the revising was done by or with the help of the original author, particularly the first three chapters. Six of the chapters deal with the morphology, physiology, and taxonomic characters of the several groups. The others have to do with their biological activities, with particular reference to fermentations and the diseases for which they are responsible. Of special interest are the 15 pages of tables showing the miscellaneous acids, metabolic products, and pigments produced by fungi. The last chapter gives a short review of antibiotics. A selected list of references is appended to each chapter . . . An important contribution to the literature of the subject."

Smith, Walter H. B. Mannlicher rifles

and pistols. 239p. 1947. Military Service, Harrisburg, Pa., $5.

Army ordnance, May-June 1947, p.540. ⅛ col.

"The author has taken available information and drawings from the great Austrian Steyr Works, prime manufacturers of all the Mannlicher weapons, together with data from minor manufacturers such as Haenel and lesser known German works at Suhl. This information has been used to prepare this interesting book which is exceedingly free of error, both as to factual material and typographical make-up. A study of the line drawings together with the descriptive matter will enable the arms student to fully comprehend these fine weapons. Although more detailed description would have been desirable in some instances, the book is highly recommended to persons interested in European arms as it presents information never before available." *H. E. Stier.*

Military engineer, March 1947, p.156. ¼ col.

"Authoritative information about forty Mannlicher sporting and military weapons. Our Garand, Winchester Carbine, Browning Machine Gun, Savage and Johnson rifles all use principles first developed by Mannlicher . . . Illustrated by over one hundred official drawings."

Smith, Walter H. B. Mauser rifles and pistols. 234p. 1946. Military Service, Harrisburg, Pa., $5.

Army ordnance, May-June 1947, p.538. ⅜ col.

"In his latest contribution to the N.R.A. Library, W. H. B. Smith has compiled not only the story of the weapons but also the history of Peter Paul and Wilhelm Mauser. He has elected to focus upon the historical aspect—and well he may—for the name of Mauser is closely connected with the Military record of eighty years . . . Most of the book is devoted to a description of Mauser arms from 1867. Some few details of late models seem to be missing, a few contradictory statements appear to be the result of haste in assemblage, and the lack of an index is unfortunate. But the author's knowledge of firearms and their history far outweigh these points, and his spotlight on the present-day status of Mauser supply is, alone, worth far more than the price." *F. W. F. Gleason.*

Sommer, A. Photoelectric cells. 104p. 1947. Chemical Pub., Brooklyn, $2.75.

Chemical and engineering news, Aug. 11, 1947, p.2322. ⅛ col.

"Gives a discussion of phototubes of the emission type and is devoted almost entirely to the three popular types of cesium tubes—namely, the silver-oxygen-cesium, the antimony-cesium, and the bismuth-oxygen-silver-cesium . . . A two-page bibliography gives numerous references to early and recent literature on photoelectric phenomena . . . Not mathematical but does contain numerous tables and illustrations which make it a practical reference work for those working on, or interested in, this field." *Ralph Stair.*

Electronics, June 1947, p.266. ⅛ col.

"Operation, characteristics, and construction of photoelectric tubes (as distinguished from photoelectric cells, the former operating by emission, the latter by barrier layer or photoconduction—the misnomer in the title should be noted) are surveyed. Although some specific information on emitting materials and operating properties is given in this monograph, the tube designer, to whom it seems directed, will find it inconclusive." *F. R.*

General Electric review, Aug. 1947, p.59. ⅛ col.

"Any person experienced in the art will find little that is new in the book. However, the beginner who wishes to acquire an elementary working knowledge of phototubes will find this a fairly adequate treatment." *L. R. Koller.*

Power, June 1947, p.130. ⅛ col.

"Treats of tubes of photoelectric emission designs, as distinct from barrier-layer and photoconducting types. First, the author gives a practical explanation of photoelectric emission, and how it is associated with the electron arrangements of light-sensitive alkali metals. This is followed by details of manufacturing photocathodes and their properties. Vacuum-, gas-filled- and multiplier-tube advantages and limitations are given. The closing chapter, which deals with photoelectric-tube applications, is confined chiefly to tube characteristics rather than circuit design. Written in England, the book naturally represents the thinking and practices of that country. General principles are, however, the same everywhere so those interested in light-sensitive tube will get much helpful information."

Scientific American, June 1947, p.281. ⅛ col.

"Chapter heads are: Manufacture and Properties of Some Types of Photoelectric Cathodes; Matching of Light Sources and Photo-Cathodes; Vacuum Photocells; Gas-filled Photocells; Multiplier Photocells; and Applications of Photocells. The last mentioned chapter is confined mainly to problems which are purely photoelectric in nature, as distinct from circuit and mechanical design problems." *A. P. P.*

Stefansson, Vilhjalmur. Not by bread alone. 339p. 1946. Macmillan, New York, $3.50.

American journal of nursing, May 1947, p.357. ⅔ col.

"The author . . . a well-known scientist and Arctic explorer, has spent many years in the Far North studying the native people and their ways of living. The book presents his observations on the diet and nutrition of the Eskimo . . . Mr. Stefansson has apparently given much thought to his subject. He speculates on the possible changes of eating habits during the evolution of man . . . Would make a useful and interesting addition to the reference shelf. While its material is presented from a scientific viewpoint, the style is easy, friendly, and very readable. And most certainly the text gives food for thought to a generation raised on the 'Basic Seven'." *Lois B. Stow.*

Natural history, June 1947, p.246. ⅔ col.

"A kind of dietetic bombshell, for the facts that Stefansson has marshalled constitute a refutation of much of the food propaganda with which Americans have been bombarded in recent years. Beginning with the desperate struggles of early man to find food, Stefansson pictures the varying conditions that changed primitive man from an anthropoidal type of forest scavenger into an upright hunter of meat. From this point onward his theme concerns the salutary effects of meat on the human frame, backed by such irrefutable proof as the teeth and bones of ancient man . . . His explanation of why our army dietitians failed to furnish pemmican as an emergency ration to our armed forces during the last war is ample evidence of the need for Stefansson's valuable book." *Belmore Browne.*

Swinnerton, H. H. Solving earth's mysteries. 220p. 1946. Harrap, London, 8s. 6d.

Geological magazine, March-April 1947, p.118. ½ p.

"Written in the simplest language compatible with accuracy, and profusely illustrated. Although the author is a distinguished palaeontologist, he does not introduce any names of fossils in the first two-thirds of the book, but begins with rocks, soils, and structures . . . It is a difficult task to write a summary of geology in 220 pages, of which about a third are figures, but the author has been very successful, by a miracle of compression, in providing a book likely to rouse interest in the subject among young people. The line drawings are very good, but it is a pity that some of the half-tones . . . are so smudgy that it is hard to make out the essential point." *R. H. R.*

Teplitz, Irving. Principles of textile converting. 180p. 1947. Textile Bk. Pub., Inc., 303 Fifth Ave., New York, $4 (Foreign, $5).

Modern plastics, Aug. 1947, p.202. 6 l.

"The essential knowledge required for the converting of all types of fabric, synthetic as well as animal and vegetable, is covered in a non-technical, straightforward style . . . Deals with such subjects as the organization of the textile industry, fibers and yarns, construction of various fabrics, converting procedures and problems, and textile merchandising."

Rayon textile monthly, June 1947, p.110. ½ col.

"The author . . . has presented . . . the essential knowledge required for the converting of all types of fabrics . . . The only book on this subject at the present time . . . Covers the subject in a simple, non-technical and straightforward style. It is not claimed to be all inclusive but gives the fundamental facts about converting . . . An excellent index completes this small, handy manual which should be on every convertor's desk . . . Also of interest to salesmen, printers, finishers, students, brokers and dyers of textile fabrics."

Textile world, June 1947, p.244. ½ col.

"What the young converter ought to know has at last been put between the covers of a book . . . Although the portions of the book dealing with fibers, yarns, and fabrics are elementary from the viewpoint of the textile manufacturer, the chapter on converting procedure is a valuable record and analysis of working details in the relationships between converter and finisher. The appendix gives copies of order forms and standards of examining goods. A chapter gives a check list of finishes."

Thompson, Henry Dewey. Fundamentals of earth science. 461p. 1947. Appleton, New York, $3.75.

American journal of science, April 1947, p.262. ½ p.

"Intended as a text for a one-semester college survey course, this book includes elementary discussion of cartography, meteorology, climatology, mineralogy, petrology, and historical geology. The majority of the space, however, is devoted to the various aspects of physical geology such as weathering; the work of streams, glaciers, wind, and the ocean; and igneous activity, metamorphism, structural deformation, and earthquakes. The subject-matter of the various chapters is thoughtfully and well chosen to cover the fields intended and the presentation is logical. In details, however, the book leaves much to be desired. The style is often abrupt. Some of the tabulations of processes seem to require further amplification, and it is not made sufficiently clear . . . that many of them are incomplete. Words are used with unfortunate lack of discrimination . . . Abundantly illustrated, but some of the photographs are so badly reproduced that they are of little value." *Charles R. Warren.*

Tibbenham, L. J. Oxy-acetylene welding handbook. 208p. 1947. Suffolk Iron Foundry, Ltd., Stowmarket, 5s. net.

Mechanical world, June 13, 1947, p.587. ¾ col.

"A most useful and instructive addition to the welding engineer's library. The title is somewhat misleading as the preface states that 90% of the contents refer to information regarding the use of bronze as a means of repairing by surface penetration, rather than welding in its true sense. The title could well have indicated this as the methods of repair described are excellent and trustworthy. Every welder should have a copy . . . on hand . . . As a text book on bronze welding application it is without equal . . . The Suffolk Iron Foundry and Mr. Tibbenham in particular are to be congratulated on the production of such a useful book, and it is to be hoped that it will encourage some other specialists in various branches of welding to follow suit." *W. J. T.*

Railway gazette, May 23, 1947, p.527. ⅝ col.

"A useful and essentially practical handbook for the welding operator who desires to improve his technique, to acquire valuable new 'wrinkles,' or to widen the scope of his work . . . Should also be of great use to foremen and supervisors in a general engineering works who wish to learn the basic principles of welding from the workshop viewpoint . . . A handy and attractively produced volume, and . . . written in a simple, unaffected style which enables the subject matter to be understood quickly and remembered easily."

Watt, Alexander. Art of soap making. Thirteenth impression. 320p. 1946. Technical Press, Surrey, England, 10s. 6d. net.

Chemical age, June 7, 1947, p.750. ½ col.

"Though the present posthumous edition is the 13th revised and enlarged impression of this work, one looks in vain for any reference to modern processes. High pressure fat splitting without catalyst, continuous distillation of fatty acids, soap powder manufacture by spray drying are some of the more conspicuous omissions . . . The bulk of the volume is made up of practical soap kettle recipes, without however, attempting to touch on the physico-chemical problems involved . . . There is not a single photograph of any machine or plant used in the soap industry. Nor, for instance, does a soap plodder or cooling press appear in the index or anywhere else. Despite these omissions, this book will find its place on the shelf in many a soap factory for the practical hints it provides." *M. K. Schwitzer.*

Chemical trade journal and chemical engineer, May 23, 1947, p.488. ¾ col.

"The appeal of this work is now mainly to the historian rather than to the student of the modern technology of the soap industry. When the first edition was published we have been unable to trace, but it certainly goes back a

good distance. In the Publishers' Note to the edition now reprinted (the Fifth), it is described as 'substantially a reprint of the last edition with a new Appendix (left by Mr. Watt in MS and now first printed) on the subject of candle making.' None of the literature references we have noticed seem more recent than 1886 . . . Some thorough going revision . . . is needed before another edition appears."

Weber, Robert L., and others. College technical physics. 761p. 1947. McGraw, New York, $4.50.

American journal of science, April 1947, p.258. ⅔ p.

"The authors . . . have endeavored to present clearly the basic ideas of physics with a minimum of mathematical derivations. Algebra and trigonometry are used freely, but no calculus is employed. Occasionally, small increments of quantities are to be found as in the derivation of the bulk modulus of a gas. Many problems are included at the end of each chapter, as well as a list of questions suitable for class discussion. The authors deserve commendation for the number and excellence of the solved examples that cover all phases of the subject. Each chapter . . . is concluded by a summary of the contents, but several portions merit special notice." *C. G. Montgomery.*

Power, June 1947, p.130. ¼ col.

"Presents the basic ideas of physics for students of science and engineering at the college level. Topics essential for a first-year course are developed in the conventional order. A feature . . . is numerical examples to clarify each principle discussed. Although algebra and trigonometry are freely used, an attempt has been made to minimize the mathematical difficulties encountered by beginning students. For the benefit of those who need to familiarize themselves with trigonometry a brief discussion is included in the Appendix. Calculus concepts are avoided throughout the book."

Welcher, Frank J. Organic analytical reagents. v.1. 442p. 1947. Van Nostrand, New York, $8.

Chemical industries, July 1947, p.118, 120. ¾ col.

"The author . . . has presented a very comprehensive treatment of the subject . . . The principal purpose in preparing the book was to assemble in one place a description of all organic compounds used in the analysis of inorganic substances, and to present a discussion of the methods employing these reagents . . . The usefulness of this volume is limited to some extent by the lack of a critical treatment of the described methods. The author states that many obviously inferior reagents and methods are included since the treatment of the subject is intended to be complete, but fails to indicate those methods which should be placed in this category. In addition, it is felt that the book might be of greater value to the practicing analytical chemist if the organization were based on the substances to be determined. However, despite these limitations, Dr. Welcher has made a contribution to analytical chemical literature, which should be of considerable value to all analytical chemists." *William H. Taylor, jr.*

Chemist, June 1947, p.251. 1¼ col.

"This book and the volumes which are to follow it attempt to assemble in one place a description of all organic compounds used in the analysis of inorganic substances and to present a discussion of the methods employing reagents. It is said to cover all publications appearing prior to January 1, 1946. The foreign journals which were unavailable during the war were checked, so far as possible, through *Chemical Abstracts* . . . The reviewer is unable to evaluate the claim that complete coverage of the literature has been made, but the style is clear and the book should be a valuable addition to any chemical library. There certainly is a great deal of useful material in this first volume and the lists of references are extensive." *Homer van B. Joy.*

Science, July 18, 1947, p.72. 1 col.

"The great number and variety of organic compounds offers one of the most promising sources for new and better analytical reagents. Volume I of this series is a valuable addition to the reference works in this interesting field of analytical chemistry and, together with the three succeeding volumes, will make a most useful treatise on organic analytical reagents." *John H. Yoe.*

Wild, F. Characterisation of organic compounds. 306p. 1947. Cambridge Univ. Press, London, 18s.

Chemical age, March 22, 1947, p.355. 1⅔ col.

"Since organic analysis differs from inorganic in that there is no set scheme to be followed, any new ideas which will enable an organic compound to be correctly allocated to its class are to be welcomed. It is therefore disappointing to find that the present volume, which claims to be suitable for final year students and research workers, makes scarcely any mention of the tests to be applied before a compound can be correctly classified. This state of affairs is illustrated by pointing out that only four pages are devoted to this very important and necessary preliminary investigation. Equally brief is the author's treatment of the separation of mixtures . . . Although the methods for preparing derivatives may well have been reviewed up to 1943, in the case of compounds such as ethers and esters which normally require fission before they can be identified, some of the more up to date methods have not been mentioned . . . Provides a most useful summary of the various ways in which an organic compound may be characterised . . . As this book is designed primarily for use in the laboratory the instructions for the actual making of derivatives should stand out from any theoretical matter which accompanies them. Unfortunately, this has not been done and so detracts from the use of the book . . . An admirable reference book but has limited uses in the laboratory." *Guy G. S. Dutton.*

Journal of the Society of Dyers and Colourists, May 1947, p.152. ¾ col.

"This book, which has been written for advanced students and research workers, deals mainly with the preparation of derivatives of members of the more important classes of organic compounds. It is obvious that a very great amount of time, care and patience has gone into the preparation of this book. Every important general method for the preparation of derivatives, published up to the end of 1945, has been summarised, full practical details are given, and the preparation of the various necessary reagents is described. Many specialised methods and references to the literature are given . . . Will be a valuable addition to any chemical library." *H. Middleton.*

Science progress, July 1947, p.567. ⅔ p.

"In its general conception and in its scope, and in most respects in its detailed treatment of the subject matter, this work is highly to be commended, but the reviewer feels compelled to make certain criticisms, mainly however with reference to presentation rather than factual content. In connection with the latter the omission of ethylenic (and possibly acetylenic) hydrocarbons from the appropriate chapter is undoubtedly serious, more emphasis should have been given to polyfunctional substances, and notes on regeneration from derivatives would have been useful. The presence of a multiplicity of errors and inconsistencies, especially in nomenclature, and ill-considered spacing of formulæ and equations throughout, which, although possibly not seriously detrimental to the usefulness of this book, are none the less irritating to the reader, particularly at a time when the presentation of scientific works has in general reached such a high standard." *E. R. H. Jones.*

Williams, A. E. Plastics in industry. 41p. 1947. Emmott, Manchester, England, 2s. 6d. net. (Mechanical world monograph, no.35.)

Foundry trade journal, July 10, 1947, p.234. ¼ col.

"This little book, divided into three chapters, tells of the newer and stronger plastics which are promised a real place in engineering . . . Details the practice currently used for the machining and grinding of plastics, which, to us, appears but little different from the handling of metals. Founders making castings for this industry will find this book of real interest." *V. C. F.*

Mechanical world, May 23, 1947, p.500. ⅛ col.

"In the ever widening range of plastic materials are some which by reason of their strength and toughness are readily adaptable to constructional purposes. They have, moreover, the common attributes of plastics of dielectric strength and resistance to the action of a great number of chemical materials. They can, therefore, as the author . . . suggests, be aptly described as 'engineers' plastics.' It is these materials with which the work is concerned. Their properties are described, procedure for machining explained, and some indication given of the possibilities to be obtained by their use. The examples described, several of them illustrated by photographs, include pieces of large-scale plant constructed entirely in plastic materials."

Wolf, Henrich F. Practice of physical medicine. 322p. 1947. Wilcox & Follett Co., Chicago, $5.

Industrial medicine, May 1947, p.272. ⅓ col.

"Represents a complete and practical text on the use of physical therapy modalities and offers a new approach to the practical application of physical medicine through simplifying its indications and striving for a common basis for all modalities. Particular emphasis is placed on the recommendation of treatment according to the nature of the pathological condition and to the reaction of each individual, rather than to a standard classification of diseases . . . Excellent illustrations supplement the description of technical procedures and schematic diagrams show the construction of various types of apparatus."

Zweng, Charles A. Airport operation and management. 312p. 1947. Pan American Navigation Service, 12021 Ventura Blvd., N. Hollywood, Calif., $4.50.

Aeronautical engineering review, May 1947, p.61. ⅔ col.

"Written for the use of universities, colleges, aeronautical schools, airport operators, and instructors, this book contains information intended to make the student well informed generally . . . A useful feature . . . is the large number of outlines, check lists, and summaries that are included; for example, an analysis of operating charges by city, the sources of revenue for a typical airport, parts of a sample lease, schedules for an accounting balance sheet, costs of a seaplane base, and an airport safety check list. A handicap to finding desired information is the lack of an index."

American aviation, April 1, 1947, p.7. ⅛ col.

"A textbook for universities and aeronautical schools as well as a useful guide for airport operators. It has much useful text material and is comprehensive in its treatment of all subjects concerned with airports and airport management. Major chapter headings are planning and building the airport, airport operation, management, making the airport pay, and regulations. Regulatory material is abundant . . . Well illustrated throughout and deserves to be widely used and recognized as a standard work on the subject."

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